

1,074,164



## PATENT SPECIFICATION

DRAWINGS ATTACHED

1,074,164

Inventor: PHILLIP LIONEL DERRICK KITCHEN

Date of filing Complete Specification: Jan. 12, 1966.

Application Date: April 28, 1965.

No. 17907/65.

Complete Specification Published: June 28, 1967.

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THE PATENT OFFICE  
24th July 1967

Page 2, line 33, for "claimed" read "claimed in"

SPECIFICATION No. 1,074,164

## ERRATUM

ing numerous pores, which pores allow the passage of a gentle flow of air therethrough while avoiding draughts, the internal surface of the floor sloping gently downwardly from the walls to prevent overcrowding in any corner of the box, and the external surface of the floor being so shaped as to ensure that, when the boxes are stacked one on top of another, there is a space below the floor to provide access of air to the exterior of the floor.

By "crush-proof" is meant a box which is not crushed by accidental impact or load, and preferably a box which is not resiliently deformable and is only crushed by a force sufficiently large to disintegrate it. By "wood wool" is meant a felted mass of long woody shavings or flexible strips having an average length of at least several inches. But other coarse fibrous material, for example, straw may be used instead. The material is impregnated with a synthetic resin, for example a phenolic resin, and lightly pressed into shape so as to ensure that the product has numerous pores which allow the passage of a gentle flow of air therethrough while avoiding draughts.

The internal bottom surface of the box slopes gently down from the sides to the centre thus ensuring an even distribution of the chickens, without internal partitioning of the box,

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holes in the top and sides, the number of which may be chosen to suit various weather conditions or the internal temperature of the vehicle in which the boxes are carried.

An example of the invention will now be described with reference to the accompanying drawings, in which:—

Figure 1 is an exploded isometric view of a box and lid,

Figure 2 is a plan of the box,

Figure 3 is a side elevation,

Figure 4 is a sectional side elevation on the line A—A of Figure 2, and

Figure 5 is an end elevation of the box.

The box is approximately square, with two end walls 10 and two side walls 11. The floor 12 has four shallow interior depressions 13 separated by two interior ridges 14 and 15 intersecting at right angles to stop chicks in the box from sliding from one side to the other should the box be tilted. The four shallow cavities 13 slope gently up to the bases of the two pairs of walls 10 and 11, and to the two ridges 14 and 15. The height of the ridges 14 and 15 above the bottom of the shallow cavities 13 is substantially less than, conveniently about  $\frac{1}{3}$  of, the height of the walls 10 and 11.

Corresponding to the interior cavities 13

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Index at acceptance:—B8 P (8J, 9B3, 16)

Int. Cl.:—B 65 d

## COMPLETE SPECIFICATION

## Improvements in or relating to Boxes

We, THORNER BROTHERS LIMITED, a British Company, of Mytholmroyd, Halifax, Yorkshire, do hereby declare the invention for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

The invention relates to boxes, and has for an object an improved means for the packaging and delivery of day old chicks, ducks, turkeys, geese and any other birds and small animals.

The invention provides a crush-proof box having an open top, and walls and a floor formed, in one piece, from synthetic resin impregnated wood wool or like material of a coarse, fibrous nature, the walls and floor having numerous pores, which pores allow the passage of a gentle flow of air therethrough while avoiding draughts, the internal surface of the floor sloping gently downwardly from the walls to prevent overcrowding in any corner of the box, and the external surface of the floor being so shaped as to ensure that, when the boxes are stacked one on top of another, there is a space below the floor to provide access of air to the exterior of the floor.

By "crush-proof" is meant a box which is not crushed by accidental impact or load, and preferably a box which is not resiliently deformable and is only crushed by a force sufficiently large to disintegrate it. By "wood wool" is meant a felted mass of long woody shavings or flexible strips having an average length of at least several inches. But other coarse fibrous material, for example, straw may be used instead. The material is impregnated with a synthetic resin, for example a phenolic resin, and lightly pressed into shape so as to ensure that the product has numerous pores which allow the passage of a gentle flow of air therethrough while avoiding draughts.

The internal bottom surface of the box slopes gently down from the sides to the centre thus ensuring an even distribution of the chickens, without internal partitioning of the box,

preventing crowding together. The surface, being bonded wood wool or like material of a coarse, fibrous nature, is very hygienic and economic in that it does away with additional packing materials and allows a surface on which the chickens can grip with their feet ensuring their greater safety and comfort in transit. The external bottom surface of the box is manufactured in such a way as to ensure a space between boxes when stacked one on top of another and thus ensures an even distribution of air between the boxes when stacked in such a way.

In use, the box is provided with a lid, which is conveniently of cardboard and fits over the side walls. The lid may be provided with air holes in the top and sides, the number of which may be chosen to suit various weather conditions or the internal temperature of the vehicle in which the boxes are carried.

An example of the invention will now be described with reference to the accompanying drawings, in which:—

Figure 1 is an exploded isometric view of a box and lid,

Figure 2 is a plan of the box,

Figure 3 is a side elevation,

Figure 4 is a sectional side elevation on the line A—A of Figure 2, and

Figure 5 is an end elevation of the box.

The box is approximately square, with two end walls 10 and two side walls 11. The floor 12 has four shallow interior depressions 13 separated by two interior ridges 14 and 15 intersecting at right angles to stop chicks in the box from sliding from one side to the other should the box be tilted. The four shallow cavities 13 slope gently up to the bases of the two pairs of walls 10 and 11, and to the two ridges 14 and 15. The height of the ridges 14 and 15 above the bottom of the shallow cavities 13 is substantially less than, conveniently about  $\frac{1}{3}$  of, the height of the walls 10 and 11.

Corresponding to the interior cavities 13

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and ridges 14 and 15, the exterior surface of the floor 12 has four shallow bulges 16 separated by two V-shaped grooves 17 and 18 intersecting at right angles and extending through the pairs of walls 10 and 11. The shallow bulges 16 do not extend to the edge of the exterior surface of the floor 12, but are surrounded by a flat area 19 of the floor, which, however, is intersected by the two grooves 17 and 18.

The box is provided with a lid having a flat top 20 and depending end and side skirts 21 and 22 to fit over the end and side walls 10 and 11. Air holes are provided in the flat top 20 at 23, and in the depending skirts 21 and 22 at 24 and 25.

WHAT WE CLAIM IS:—

1. A crush-proof box having an open top, and walls and a floor formed, in one piece, from synthetic impregnated wood wool or like material of a coarse fibrous nature, the walls and floor having numerous pores, which pores allow the passage of a gently flow of air there-through while avoiding draughts, the internal surface of the floor sloping gently downwardly from the walls to prevent overcrowding of small birds or animals in the box in any corner of the box, and the external surface of the floor being so shaped as to ensure that, when the boxes are stacked one on top of another, there is a space below the floor to provide access of air to the exterior of the floor.

2. A box as claimed in claim 1 provided

with a lid having a top and depending skirts to fit over the side walls of the box, air holes being provided in the top and depending skirts.

3. A box as claimed in claim 2 wherein the lid is made of cardboard.

4. A box as claimed in any one of claims 1 to 3 having shallow interior depressions separated by interior ridges intersecting at right angles, the height of the ridges being substantially less than the height of the side walls.

5. A box as claimed in claim 4 having four shallow interior depressions separated by two interior ridges intersecting at right angles.

6. A box as claimed in any one of claims 1 to 5 wherein the exterior surface of the floor has shallow bulges separated by grooves intersecting at right angles.

7. A box as claimed in claim 6 wherein the exterior surface of the floor has four shallow bulges separated by two V-shaped grooves intersecting at right angles.

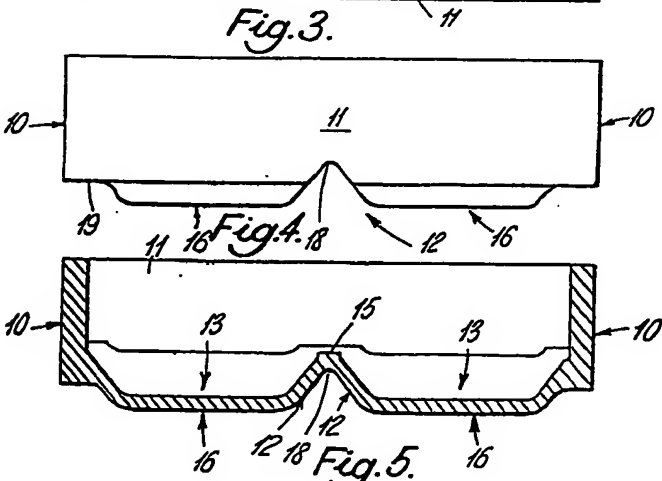
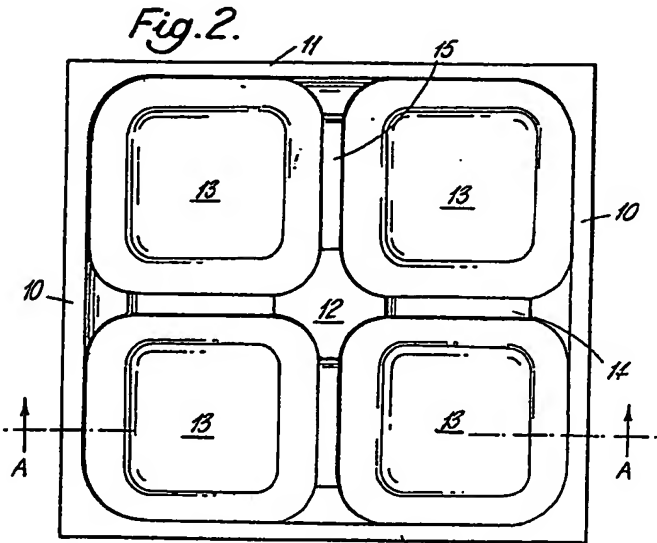
8. A chick-box as claimed in any one of the preceding claims wherein the impregnating resin is a phenolic resin.

9. A chick-box substantially as hereinbefore described with reference to the accompanying drawings.

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Chartered Patent Agents,  
Agents for the Applicants.

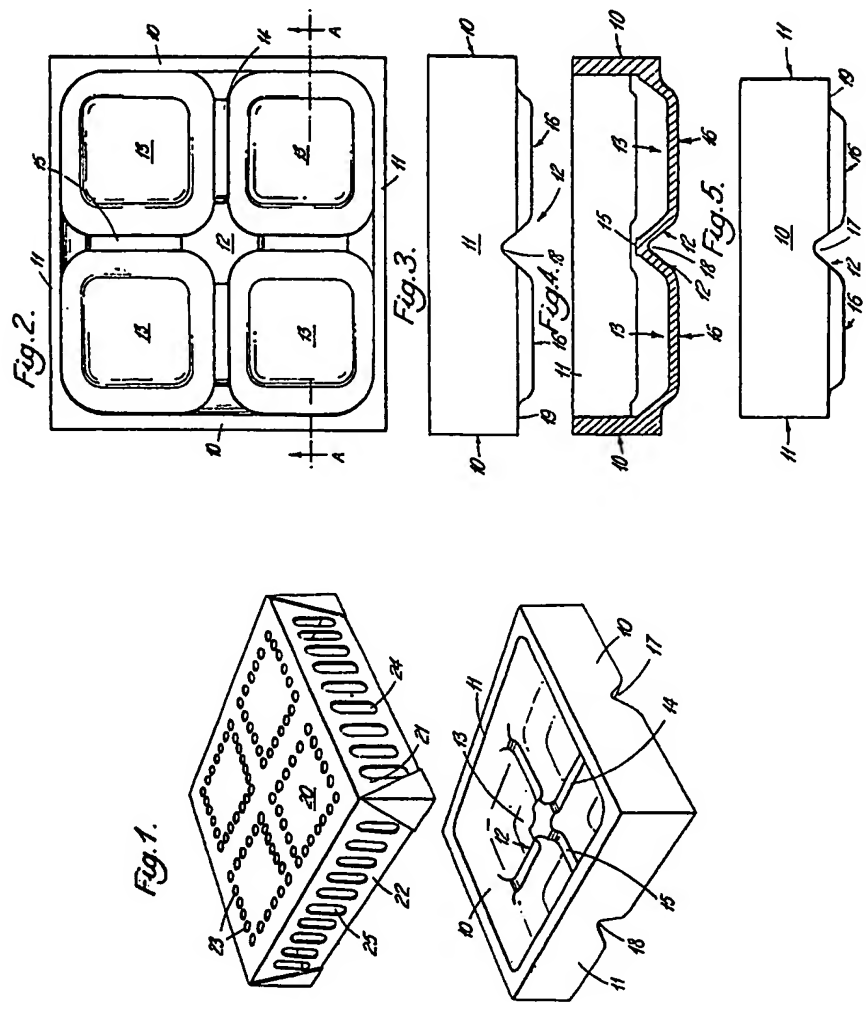
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